## 0135

### Cardiogenic shock in elderly patients with acute myocardial infarction. The FAST-MI programme

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*Rationale* Though cardiogenic shock (CS) after AMI is more common in the elderly, information on its prevalence, determinants and prognostic factors in the aged is scarce.

*Methods* We analysed incidence and 1-year mortality of CS in 4 nationwide French surveys carried out 5 years apart from 1995 to 2010, including consecutive STEMI and NSTEMI patients over one-month periods.

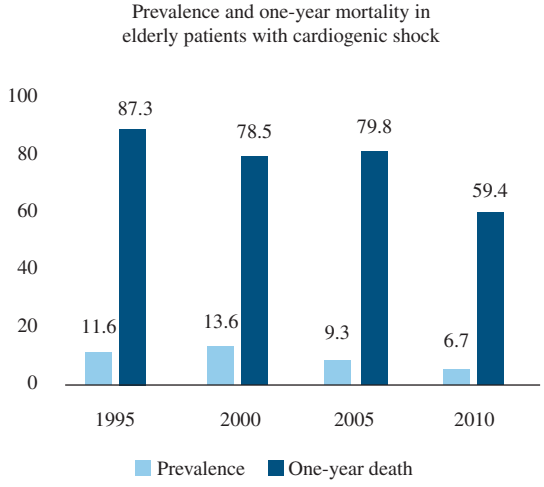
*Results* Among the 10,610 patients, 3,389 were aged ≥75 years, of whom 9.9% developed CS.

Incidence of CS decreased from 11.6% in 1995 to 6.7% in 2010, P=0.02. Use of PCI ≤3 days from admission increased for both patients with and without CS (11% to 48% and 5% to 55%, respectively), as did statin use (1% to 70% and 4% to 82%, respectively). Occurrence of atrial and ventricular fibrillation decreased in patients without CS (22% to 9%, and 3.6% to 1.5%, respectively, P<0.001), but not in those with CS (19% to 20%, and 10% to 8%, respectively).

Conversely, AV block decreased in patients with (30% to 11%) or without CS (9% to 3%).

One-year mortality was 77% in CS patients, versus 22% in patients without CS. From 1995 to 2010, mortality decreased from 87% to 59% in CS patients and from 30% to 17% in patients without CS (P<0.001). In CS patients, age, ventricular fibrillation and STEMI, were independent correlates of increased 1-year death, while study period was associated with decreased mortality (2010 vs 1995: HR 0.56,0.33-0.94 P=0.03), along with early use of PCI, statins or LMWH.

*Conclusion* The prevalence of CS is higher in elderly patients but has decreased in the past 15 years. One-year mortality remains considerable, but decreased by 32%, a decrease potentially mediated by broader use of PCI, statins and LMWH. Occurrence of ventricular fibrillation in patients with CS is a correlate of increased one-year mortality.




***Abstract 0135 – Figure***

*The author hereby declares no conflict of interest*

## 0260

### 3D-transeosphageal echocardiography usefulness for assessment of cardiac output in intensive care unit: an ultrasound versus thermodilution comparative study for patients under mechanical ventilation

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*Introduction* Hemodynamic evaluation is a major tool for management of intensive care unit (ICU) patients. Due to insufficient echogenicity, transthoracic echocardiography could be noninformative (dorsal decubitus, mechanical ventilation).

Three-dimensional trans-oesophageal echocardiography (3D-TEE) is a new non-invasive ultrasound modality for quantitative and semi-quantitative assessment of cardiac output. Only few validation data are available in this indication.

*Aim* To evaluate feasibility and diagnostic performance of 3D-TEE for assessment of cardiac output in ICU. Intermittent thermodilution measurement via transpulmonary method was used as benchmark.

*Methods* Fifteen patients under mechanical ventilation, without any significant valvular disease or mechanical hemodynamic support were prospectively included. Cardiac output was calculated with transpulmonary thermodilution (PICCO monitoring). 3D-TEE (Philips, IE33) was performed just after invasive measure. Left ventricular volume loops were recorded then semi-automatic analysis of 3D-loops were performed off-line and blinded to thermodilution values. We used correlation coefficient and Bland-Altman method to compared these two modalities.

*Results* Thirty invasive measures were recorded for fifteen patients under mechanical ventilation. 29 (97%) 3D-TEE were usable for semi-automatic analysis of left ventricular volume and cardiac output. Correlation coefficient between invasive and non-invasive methods was 0.78. Cardiac output estimation with 3D-TEE were associated with a mean bias of 0.35 l/min with 95% limits of agreement between -2.8 et 2.2 l/min. Mean duration of 3D-TEE semi-automatic analysis was 5 minutes.

*Conclusion* Cardiac output assessment with 3D-TEE is feasible with ICU patients under mechanical ventilation. Data obtained with this new non-invasive ultrasound modality have a good correlation with thermodilution values. Bias seems to be acceptable but 95% limits of agreement of both methods are quite broad.

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## 0148

### Characteristics and clinical outcome of patients admitted in the intensive care unit for acute myocarditis

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*Introduction* Although myocarditis is increasingly recognized in clinical practice, the characteristics and prognosis of patients with suspected myocarditis are poorly defined. Therefore, the aim of this study was to describe the characteristics and clinical outcome of patients admitted to a university hospital for acute myocarditis.

*Methods* Retrospective study of patients admitted to the cardiology intensive care unit of a university hospital between January 2009 and March 2014 with a discharge diagnosis of myocarditis. Patients with suspected acute coronary syndrome (ACS) underwent either coronary angiography or coronary computed tomography angiography (CCTA). Clinical follow-up was obtained by phone call to the referring physician.

*Results* During the study period, 84 patients (mean age 37±14 years old, 83% males) were admitted for myocarditis. 54% of admissions occurred between November and February. A chest pain was present in 93% of Pts and 35.7% of Pts had fever in the preceding month. In 38.1% of Pts, ECG was suggestive of ACS whereas diffuse ST elevation was found in 26.2% of Pts and a normal ECG in 23.8%. A pericardial effusion was found in 31.3% of Pts. Mean ejection fraction was 59.6±8.8%. Peak Troponin was 657±704ng/l.

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